Bill Brewer
Granville Site Technical Committee
10805 Cahill Road
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Via Express Mail

January 4, 2002

Mr. Kevin Adler, Remedial Project Manager
U.S. Environmental Protection Agency, Region 5
Office of Superfund, Remedial & Enforcement Response Branch
77 West Jackson Boulevard
Chicago, Illinois 60604-3590

Subject: Granville Solvents Site Removal Action Quarterly Report – Fourth Quarter 2001

Dear Mr. Adler:

I have enclosed two copies of the Fourth Quarterly Report for the Removal Action at the Granville Solvents Site on behalf of the Granville Solvents Site PRP Group. Copies have been sent to the following individuals:

1. Mr. Steve Acree, U.S. EPA
2. Mr. Fred Myers, Ohio EPA
3. Mr. Joe Hickman, Manager, Village of Granville

If you have any questions regarding this report, please contact me at (919) 668-3218.

Regards,

Bill Brewer

William S. Brewer, Ph.D.
Granville Technical Committee Chair

cc: Peter Felitti, Regional Counsel, US EPA
Ben Pfefferle, Chairman, GSS PRP Group
Granville Technical Committee
G. Myers, Metcalf & Eddy
T. Struttmann, Sharp & Associates

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GRANVILLE SOLVENTS SITE
REMOVAL ACTION QUARTERLY REPORT
FOR OCTOBER, NOVEMBER, AND DECEMBER 2001

January 2002

Pursuant to the requirement set forth in the Administrative Order by Consent (AOC, September 7, 1994) between the U.S. EPA and the Granville Solvents Site (GSS) Potentially Responsible Parties (PRP) Group, in Section 2.5 – Reporting, and in a letter dated November 14, 1996, from Ms. Diane Spencer (U.S. EPA), this report constitutes the quarterly written progress report concerning actions undertaken pursuant to the AOC.

I. PROGRESS MADE DURING REPORTING PERIOD

Source Area Groundwater Control

The groundwater pumping and treatment system operated 744 hours in October, 736 hours in November, and 742 hours in December, for a total of 2,222 hours (99.55% of the total hours available) during the fourth quarter of 2001. Since operation of the treatment system began in December 1994, the system has been operating over 98.7% of the available time.

During the fourth quarter of 2001, the treatment system processed approximately 11.2 million gallons of water in October, 10.45 million gallons of water in November, and 11.4 million gallons of water in December for a total of 33.05 million gallons of water for the quarter. Since operation began in December 1994, the system has processed more than 832.6 million gallons of water.

During the fourth quarter of 2001, Metcalf & Eddy collected measurements of air pressure in the air-stripping unit's inlet and exhaust ducts on a monthly basis. These data were used to calculate airflow values. Following acid washing in October, airflow increased from 1,761 cubic feet per minute (cfm) to 1,901 cfm. The air flow rate calculated for the month of December was 1936 cfm. M&E continued to perform scheduled monthly maintenance on the treatment system. This maintenance ensures that the system is performing at maximum efficiency and decreases unscheduled downtime. This maintenance included replacing bag filters, lubricating the transfer pump and blower motors, and maintaining the flow meters and level sensors.

Water samples were collected from the system's influent and effluent sampling ports on October 4, October 17, November 14 and December 12, 2001. The additional sampling event in October was conducted to confirm the sampling results obtained in the previous sampling event. Analytical results are presented in Table 1.

TABLE 1

VOCs	Influent OCT 4	Effluent OCT 4	Influent OCT 17	Effluent OCT 17	Influent NOV 14	Effluent NOV 14	Influent DEC 12	Effluent DEC 12
1,1,1-trichloroethane	15.6 µg/l	ND	14.2 µg/l	ND	13.9 µg/l	ND	14.1 µg/l	ND
Cis-1,2-dichloroethene	3.4 µg/l	1.5 µg/l	3.2 µg/l	ND	3.2 µg/l	ND	3.2 µg/l	ND
Tetrachloroethene	17.5 µg/l	0.39 µg/l	18.9 µg/l	ND	19.5 µg/l	ND	17.2 µg/l	ND
Trichloroethene	18.9 µg/l	0.64 µg/l	18.0 µg/l	ND	17.8 µg/l	ND	18.3 µg/l	ND
1,1-dichloroethylene	ND	ND	ND	ND	ND	ND	ND	ND

Extraction well GSS-EW1 was operated at an average flow rate of approximately 130 gallons per minute (gpm) during the fourth quarter of 2001. The average flow rate from GSS-EW2 was approximately 125 gallons per minute (gpm) during the fourth quarter of 2001. The total pumping rate averaged 255 gpm for the fourth quarter of 2001, 254 gpm for the month of October, 234 gpm for the month of November, and 240 gpm for the month of December.

The data presented in Table 1 represents influent and effluent concentrations at the GSS, and Metcalf & Eddy has recorded that approximately 33.05 million gallons of water were processed for the fourth quarter of 2001. Based on these data, approximately 0.21 lb/day in October, 0.19 lb/day in November and 0.20 lb/day in December of total VOCs were discharged to the atmosphere during the reporting period.

Groundwater Monitoring Plan

Groundwater level measurements were collected on October 4, October 17, November 14 and December 12, 2001. These data were used to develop potentiometric surface maps.

Source Area Soils

Sharp and Associates, Inc. (SHARP) continued operation of the air injection/air sparging/ and soil vapor extraction (AI/AS/SVE) system during the fourth quarter 2001.

The treatment system was tested and started up on September 9, 2001. The air injection and soil vapor extraction components were brought on line in late September. The air sparging component of the system was started up during October after the whole air sample confirmed that operation was below the de minimus air discharge of 10 lb/day.

The whole air sample results during the quarter are as follows:

TABLE 2

Volatile Compound	Air Sample 9/7/01	Air sample 10/02/01	Air Sample 12/13/01
1,1-Dichloroethane	ND	ND	24 J
cis-1,2-Dichloroethene	440 J	420	81
1,1,1,-Trichloroethane	26,000	13,000	1,500
Trichloroethene	21,000	15,000	2,100
Tetrachloroethene	48,000	24,000	8,400

All results are presented in $\mu g/m^3$ analyzed by EPA method TO-14 by Severn Trent Laboratories in Knoxville, TN.
J = estimate result, the result is less than the reporting limit.

System maintenance followed procedures outlined in the Removal Action Operations and Maintenance Manual (SHARP, October 26, 2001). To date, approximately 119 pounds of total VOCs have been removed with the SVE/AS/AI system. The removal rate has been maintained below the de minimus value of 10 lb/day. On November 13, 2001, Sharp began cycling the SVE wells to change the vapor stagnation points between vapor extraction wells and increase overall mass removal.

Active or Completed Tasks

The following specific tasks were completed during the reporting period:

- Collected water samples on October 4, October 17, November 14 and December 12, 2001 from the groundwater treatment system influent and effluent sampling ports.
- Collected water level measurements on October 4, October 17, November 14 and December 12, 2001.
- Collected groundwater treatment system airflow data on a monthly basis.
- Collected the semi-annual suite of samples from the monitoring well network on November 28, 2001.
- Operated the SVE/AI system per the plan adding air sparging in Oct. 2001.
- Collected initial air samples during startup of the soil treatment system.
- Removed and disposed of additional debris at the site on October 24, 2001. The debris was retrieved from the woods was transported and disposed of at the Environmental Quality Company landfill, in Belleville, Michigan.
- Submitted Operations and Maintenance Manual for the AI/SVE/AS system to the Granville Site Technical Committee.

II. DELIVERABLES (CURRENT PERIOD AND NEXT PERIOD)

Current Period:

Deliverable	Due Date	Delivered
Construction Completion Report	September 28, 2001	October 4, 2001
Operations & Maintenance Manual	October 29, 2001	October 29, 2001
Quarterly Report	January 7, 2002	January 7, 2002

Next Period:

Deliverable	Due Date
Quarterly Report	April 7, 2002

III. DIFFICULTIES ENCOUNTERED & RESPONSE ACTIONS TAKEN THIS PERIOD

None encountered during the period.

IV. ANTICIPATED ACTIVITIES DURING NEXT REPORTING PERIOD

During the next reporting period, the following tasks will be performed:

- Collect potentiometric surface data on a monthly basis.
- Sample the groundwater treatment system influent and effluent water on a monthly basis.
- Perform scheduled maintenance of the groundwater treatment system
- Collect the quarterly suite of samples from the groundwater monitoring network.
- Continued operation, maintenance, and monitoring of the SVE, AS, and AI systems.